Rice University
Civil and Environmental Engineering

CEVE 480 Senior Design
Spring 2021 Syllabus

Course Information

CEVE 480 is a continuation of CEVE 481 Senior Design. The projects identified and scoped in the fall semester will be taken to a design level implementing the knowledge you have gained during your previous years. The class will be presented in dual mode as last year where you have the option of attending class remotely or in person. Per Rice directive, the year will begin as 100% remote. We will monitor to see when we will be able to meet in person. It is important that you actively participate in class. Class participation is part of the evaluation.

The 6 projects developed as concepts in the Fall Semester will be further developed into a final report and presentation to a jury. It is important that each one of you participate and play a significant role in your team's report and presentations. There will be 6 teams to address the projects with one of the teams, the Renewable Energy Team supporting the other 5 Teams. Elements from the Future of Mobility Project ideas are to be integrated into each of the physical projects. The intent is to collaborate so that each team's efforts are integrated into the other Team's work resulting in a more complete project. There will be workshops on each project where the whole class is to participate in developing the projects.

This semester in CEVE 480, you will be asked to make two presentations. The first presentation will be an interim design report in which you will present your project in a schematic format, discuss your research on the project and present what still needs to be coordinated and designed, where you are on budget and schedule for the project, and any required additional services and special considerations needed to complete the project. The other project teams will be allowed and encouraged to question your team regarding its presentation to obtain information they need and to question what was presented. The last presentation will be on the final design of your project. A written report will be required to document the body of work for your project.

There is an assignment to enter a project poster in the 2021 Engineering Design Showcase and Poster Session in April, assuming that it will be held. If the Design Showcase is not held, a virtual poster presentation to CEVE instructors and other special invitees will be held. These presentations along with class participation, your written project report and your project poster will determine your grade in CEVE 480.

Your grades will be based on your class participation, the effectiveness of your team, the quality of your work, the creativeness of your solutions and the quality of the presentations. Class participation is the most important of all. You are expected to participate in class discussions, ask questions about the other teams' projects and presentations, and spend quality team time during that portion of the class.

You are encouraged to find out as much as you can on your own before asking questions. Much of learning is in the pursuit of an answer. Your instructors are working industry professionals, so have patience if we can't get back to you quickly. You may email or phone us, but please be respectful of our time during the day. Feedback on the presentations and discussions is encouraged.

Grading
The following are the basis of grading:

- Teamwork 5%
- Class Participation 5%
- Assignments 15%
- Poster 15%
- Project Progress Presentation 20%
- Final Design Presentation 20%
- Report 20%

In addition, there will be up to 3 extra credit points for those who actively contribute to class discussions on a regular basis, ask quality questions of presenters, and for extra effort on preparing assignments.

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Instructors

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CEVE 480 – Senior Design Syllabus – Spring 2021 – Thurs 3-5 PM
(1-18- 2021)

Date 2019	Week No.	TOPIC Completion of assignments is important to your grade for the class. All assignments must be submitted on Canvas on time
Jan 28	**1**	***Discussion***: Review of presentations and expectations for Spring Semester. *Discussion on Project Problem Statemen and Project Scope.* ***Assignment*****:** Due 2/4 **–** Prepare the Project Problem Statement to match the final concept and prepare to discuss on Feb 4th
Feb 4	**2**	***[Team Meeting]*** **→*Guest Speaker:*** Tyler Swanson – Rogers Partners Architects ***Workshop:*** Discussion on Project Problem Statements and Final Scope. Each team to discuss the statement and scope with class.
Feb 11	**3**	***[Team Meeting]*** **→ *Workshop***: Design refinements discussions – (1) Future of Mobility (2) Washington Avenue (3) Block 18 – all to include renewable energy elements
Feb 18	**4**	***[Team Meeting]*** **→ *Workshop:*** Design refinement discussions – Pierce Elevated including renewable energy elements. Discussion on Interim Design Presentations ***Assignment***: Prepare Interim Design Presentation
Feb 25	**5**	**Interim Design Presentation** ***Assignment:*** Due 3/4 **-** Prepare report outline for review and comment
Mar 4	**6**	***[Team Meeting]*** **→ *Discussion:*** *Site Plan Development and Documentation*. ***Assignment:*** Due 3/10 Prepare Design Sketches.
March 11	**7**	***[Team Meeting]*** **→ *Workshop:*** Review Design Sketches, ***Discussion*****:** Project Reports: Expectations on report and presentations. Technical Writing Review **(Tracy Volz)** . ***Assignment:*** Due 3/17 Develop Report Outline and Drawing List
March 18	**8**	***[Team Meeting]*** **→ *Workshop:*** Review Design Sketches, ***Discussion:*** Review Outlines and discuss ***Assignment*** Due 3/25: Draft Report
March 25	**9**	***[Team Meeting]*** **→ *Discussion:*** Comments on Draft Reports. **Workshop:** Project Reviews ***Assignment***: Presentations, Posters and final reports
Apr 1	**12**	***[Team Meeting]*** **→ *Workshop:*** Review Projects in preparation for final presentation and reports
Apr 8	**11**	***Sprinkle Day – no class***
Apr 15	**12**	**Final Project Presentations**: Panel of Reviewers
Apr 22	**13**	**Poster Competition**
Apr 30	**14**	***Final Reports due – no class***

Any student with a documented disability seeking academic adjustments or accommodations is requested to speak with us during the first two weeks of class. All such discussions will remain as confidential as possible. Students with disabilities will need to also contact Disability Support Services in the Ley Student Center.

April 8 Sprinkle Day
April 22 Design Showcase
April 30 – Last Day of Classes